SAN DIEGO & ARIZONA EASTERN RAILWAY COMPANY
TIJUANA & TECATE RAILWAY COMPANY

TIME TABLE

79

To Take Effect Sunday, January 30, 1944, at 12:01 P.M.

PACIFIC STANDARD TIME

For the government and information of employes only.

H. R. GERNREICH,
Vice-President and General Manager.

2 EASTWARD — Carriso Gorge Subdivision — WESTWARD

Capacity of sidings in car lengths	SECOND CLASS 452 Imperial Valley Mixed Leave Daily Ex. Sunday	FIRST CLASS 362 Californian Leave Daily	Distance from San Diego	Time Table No. 79 January 30, 1944 STATIONS	Distance from El Centro	FIRST CLASS 363 Californian Arrive Daily	SECOND CLASS 451 Imperial Valley Mixed Arrive Daily Ex. Sunday
		2.45 PM	0.0	R SAN DIEGO	148.1	s 1.20 PM	
		2.48 PM	0.4	MARKET STREET	147.7	1.16 PM	
Figures sh	own Between	San Diego and	Market Str	eet are for Information Only. Be Governed	by Current	TimeTable A.	T. & S. F. Ry.
		2.48 PM	0.4	MARKET STREET	147.7	1.16 PM	
			0.7	FIRST STREET	147.4		
Yard Limits No.1 45 BKWO YP	9.30 PM	2.51	1.1	TO-R EIGHTH STREET	147.0	1.13	s 4.30 AM
P	9.39	3.00	4.8	TWELFTH ST. Natl. City	143.3	1.04	4.17
14 P	f 9.46	f 3.06	7.4	CHULA VISTA JCT. (Crossing C. V. Line)	140.7	f 12.57	f 4.08
30 P	9.51	3.09	9.1	BOAL	139.0	12.53	4.03
20 P	f 9.59	3.13	11.1	PALM CITY	137.0	f 12.49	f 3.57
Yd.Limits 30 KP	s 10.09	s 3.24	15.5	TO-R SAN YSIDRO	132.6	s 12.41	s 3.45
110 YP	s 10.19	s 3.32	16.2	R TIJUANA	131.9	s 12.36	s 3.35
30	10.24	3.37	18.5	AGUA CALIENTE	129.6	12.31	
47 P	f 10.39	f 3.49	24.0	GARCIA	124.1	f 12.20	f 3.11
33	f 10.49	f 3.59	27.5	MATANUCA	120.6	f 12.11 PM	f 2.59
35 WYP	f 11.17	f 4.22	36.6	REDONDO	111.5	f 11.52 AM	f 2.32
42 P	11.55 PM	4.49	48.4	LA PUERTA	99.7	11.28	1.56
31 WP	s 12.14 AM	s 5.02	52.8	TO-R TECATE	95.3	s 11.19	s 1.43
22	f 12.37	f 5.17	59.6	LINDERO	88.5	f 11.03	f 1.16
16 P			60.3	DIVISION	87.8		
30 OP	f **1.01**	s 5.33	65.8	TO CAMPO	82.3	s 10.50	f **1.01**
33 WP	1.20	5.47	71.9	CLOVER FLAT	76.2	10.35	12.25
33 P	1.42	6.01	78.4	PUEBLO	69.7	10.22	12.05 AM
45 YP	s 2.03	f 6.18	84.5	HIPASS	63.6	f 10.10	s 11.50 PM
10 WP	s 2.33	s 6.39	92.9	TO JACUMBA	55.2	s 9.45	s 11.00
37 OP	2.36	6.41	94.0	TITUS	54.2	9.39	10.47
15 Spur	f	f	96.0	DUBBERS	52.1	f	f
19 P	3.03	f 7.03	100.7	CARRISO GORGE	47.4	9.13	10.13
P		f 7.10	102.3	TUNNEL 15 SPUR	45.8	f 9.06	
72 WP	f 3.38	f 7.34	109.7	DOS CABEZAS	38.4	f 8.40	9.04
36 P	4.08	7.49	117.7	SUGAR LOAF	30.4	8.14	8.22
35 WOYP	s 4.30	f **7.58**	122.5	COYOTE WELLS	25.6	f 7.58	f **7.58**
62 P	f 5.02	f 8.13	130.0	PLASTER CITY	18.1	f 7.43	f 7.40
45 P	f 5.28	f 8.29	139.8	SEELEY	8.3	f 7.27	f 7.20
15	5.40	8.38	145.1	WILSIE	3.0	7.17	7.10
Yard Limits BKWYP	s 5.53 AM	s 8.46 PM	148.1	TO-R EL CENTRO	0.0	7.10 AM	7.01 PM
	Arrive Daily Ex. Monday	Arrive Daily		(148.1)		Leave Daily	Leave Daily Ex. Saturday
	(8.23) 17.53	(5.58) 24.78		Time over District / Average Speed per Hour		(6.06) 24.21	(9.29) 15.50

S. D. & A. E. Ry. — T. & T. Ry. — S. D. & A. E. Ry.

List of additional Stations page 3.

Nos. 451, 452 and 363 stop on signal at Mills Crossing.

Eastward — La Mesa Subdivision — Westward

Capacity of sidings in car lengths	Distance from San Diego	Time Table No. 79 January 30, 1944 STATIONS	Distance from El Cajon
Yd.Limits BKW OYP	1.1	TO-R EIGHTH STREET	15.7
13	4.7	CHOLLAS	12.1
5	10.4	LEMON GROVE	6.4
25	12.3	TO LA MESA	4.5
9	15.3	GROSSMONT	1.5
19	16.8	TO EL CAJON	0.0
		(15.7)	

Eastward — Coronado Subdivision — Westward

Capacity of sidings in car lengths	Distance from San Diego	Time Table No. 79 January 30, 1944 STATIONS	Distance from Third St. (Chula Vista)
	4.8	TWELFTH ST. Natl. City	4.8
Yard Limits	5.7	24th STREET Natl. City	3.9
	7.1	POTASH	2.5
	7.4	F STREET JCT.	2.2
	7.6	CHULA VISTA JCT. (Crossing El Centro Line)	2.0
	8.5	TO CHULA VISTA	1.1
	9.6	K STREET Chula Vista	0.0
		(4.8)	

Eastward — Coronado Subdivision — Westward

Capacity of sidings in car lengths	Distance from San Diego	Time Table No. 79 January 30, 1944 STATIONS	Distance from North Island
Yard Limits	7.4	F STREET JCT.	15.3
13	9.9	SALT WORKS	12.8
11	18.7	TENT CITY	4.0
	20.7	CORONADO (Ferry Landing)	2.0
Yard	22.7	NORTH ISLAND	0.0
		(15.3)	

SPECIAL INSTRUCTIONS

RULE 2. Watch Inspectors:

Stanley A. Pope, Manager of Time Service.....San Francisco
San Diego.....H. A. Cameron, local watch inspector, Watts Building
El Centro.....R. E. Couch, local watch inspector
Calexico.....O. F. Haun, local watch inspector

RULE 2 (A). Watches subject to inspection must be presented monthly, between first and fifteenth, instead of semi-monthly, to a designated inspector.

RULE 10 (H) is changed to read: "Yellow signal must be placed one-quarter mile from structure," instead of three-fourths mile. Green signal referred to in rule will not be used.

RULE 10 (J) is changed to read: "Slow boards will be placed one-quarter mile from structure or track," instead of three-fourths mile.

RULE 30. Engine bell must be rung continuously between the following points:

Main Line: San Diego and Kilometer 7, Garcia and east end of Tunnel 2, Mile Posts 96 and 106.

Lakeside Line: 8th Street and Mount Hope Cemetery.

RULE S-72. Westward trains are superior to trains of the same class in the opposite direction.

RULE 83 (B). First-class trains may register by ticket at Eighth Street.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following points:

San Diego:
Carriso Gorge Subdivision.....East MP 4.8
San Ysidro—Tijuana.....West MP 14.5 / East MP 16.6
El Centro.....West MP 147.2

RULE 98. RAILROAD CROSSINGS NOT INTERLOCKED: At following grade crossings trains will stop not nearer than 50 feet nor farther than 500 feet from crossing and will proceed only on signal from flagman:

Destroyer Base Crossing 600 ft. west of 32nd St., San Diego—Carriso Gorge Subdivision.

Crossing at Chula Vista. Exception—Carriso Gorge Subdivision trains will expect to find the main track blocked and will pass over the crossing not to exceed 15 miles per hour.

San Diego Electric Railway crossing at 16th Street, San Diego.—La Mesa Subdivision.

San Diego Electric Railway crossing at First and Orange Street, Coronado—Coronado Subdivision.

RULE 103 (A). Trains entering and leaving Otay Gravel Pit will be preceded by flagman over Main Avenue.

At Second Avenue, and at sidewalk on Third Avenue, near G Street, Chula Vista, and at Lookout Avenue, La Mesa, stop and be preceded over crossing by flagman.

RULE 104. The normal position of Twelfth St., National City and Chula Vista Junction switches is for the San Diego-El Centro main track.

RULE 105. Track No. 1 in classification yard is siding for 8th Street.

First crossover switch west of San Ysidro station is initial switch for westward trains.

RULE 221. Lights will not be displayed in train order signals at La Mesa and El Cajon except when train order operator is on duty.

Trains must obtain clearance before leaving:

Eighth Street. Eastward trains.

San Ysidro, Tecate ... All trains.

AUTOMATIC BLOCK SIGNALS

RULE 505. When Signals No. 1022 and No. 1023 are in "stop" position, train shall stop and then proceed immediately with caution to Bridge No. 102-A, and shall not proceed over Bridge No. 102-A until authorized by either tunnel guard, bridge foreman or track foreman.

RULE 825. When necessary to cut crossing and a distance of 100 feet on each side cannot be provided, a flagman must protect. Cars must not be left in any position that would in any way intercept the view of an autoist or pedestrian of an approaching train unless crossing is protected as stated above.

When cars are left on grade not protected with derail they must be chained to the rail.

Cars must not be cut off train on grade, depending on hand brakes or air brakes to hold them, but must be placed with the engine.

RULE 833. Whenever practicable locomotive cranes, or cranes of similar type must be handled in trains with heavy end forward.

Cranes or machines with rotating body, loaded on open cars, must not be moved until inspected and released by mechanical department. Conductors must not move Jordan Spreaders, except when in use, unless wings are protected against spreading by chain or tie bar extending from wing to wing and wing arm to wing arm.

RULE 836. Cars moved from one station to another ahead of engine on descending grade must be chained to the engine. Switching movements on descending grade must be protected by a derail. When practicable, engine must be kept on lower end of cars.

RULE 869. All brakemen, except rear brakeman, will ride on top of freight and mixed trains as follows:

EASTWARD ..... Hipass to Jacumba. Culvert 106-B to Coyote Wells.

WESTWARD ON TRAINS OF 25 OR MORE CARS ..... Mile Post 83 to Tecate. Kilometer 54 to Redondo.

Rear brakemen on freight and mixed trains between Garcia and Matanuca and on descending grades between Redondo and Coyote Wells will observe track from rear of caboose or coach so that train may be stopped in event of derailment. Lights are provided on coaches and Dietz lanterns on cabooses to assist in observing the track.

RULE 878. Engine flues must be sanded Eastward approaching Hipass, Westward when approaching Culvert 106-B.

Engine flues must not be sanded while passing places where damage from fire might result.

TRAIN INSPECTION

Westward freight and mixed trains will stop not less than five minutes at Clover Flat or Campo and Tecate for cooling of wheels and inspection.

Eastward freight and mixed trains will stop not less than five minutes at Jacumba, Culvert 106-B, Sugar Loaf and Coyote Wells for cooling of wheels and inspection.

AIR BRAKE RULES

RULE 3. Standard Brake-Pipe Pressure for freight and mixed trains is 80 pounds.

RULE 24. When helper engines are in trains, after a rear end test has been made, the leading engine must not attempt to start until the helper engine has whistled off. The helper engine must not whistle off until receiving signal from the rear, which will not be given before the air pressure on caboose gauge indicates seventy (70) pounds.

Rear end test must be made by all freight and mixed trains at Mills Crossing or Hipass.

Rear end test must be made by eastward freight and mixed trains at Culvert 106-B.

RULE 33. Gross tonnage of any freight train must not exceed the following number of M's per operative brake between the stations shown:

Hipass and Coyote Wells.....100 M's
Hipass and Redondo.....125 M's

All retainers on freight and passenger trains must be used: Eastward Hipass to Jacumba, Culvert 106-B to Coyote Wells.

RULE 39. Running test must be made by passenger trains at Hipass.

Air must be cut in when handling cars on Commercial Street between 13th and 32nd Streets, San Diego.

Air brakes on two adjoining cars must not be cut out leaving any station where cars can be separated.

MISCELLANEOUS

When pushing trains out of yards engine will not be placed behind wooden underframe equipment.

Employes of the San Diego & Arizona Eastern Railway Company, while performing service on tracks of the Southern Pacific Company (Pacific Lines) at or between El Centro and Calexico, are under jurisdiction of the officers and will be governed by Rules and Regulations of the Transportation Department, timetable and bulletins of the Southern Pacific Company (Pacific Lines).

SPEED RESTRICTIONS

MAXIMUM SPEED OF TRAINS, EXCEPT AS OTHERWISE NOTED, IN MILES PER HOUR AS FOLLOWS:

	M.P.H.
Passenger trains	40
Freight and mixed trains and light engines	35
Engines 101 to 106, inclusive, and Consolidation Engines	35
Engines backing, coupled in train or light, main line	25
Same on branch lines	20
Trains handling locomotive crane	20
Trains handling dead or disabled engines with all rods on or with main or side rods removed	30
Same with main and side rods removed	20
All trains through sidings	12

ALL TRAINS between following points:

Bridge 98 C and Tunnel 8, on curves	10
Tunnel No. 5 at Mile Post 96.6 and Culvert 106-B	15
Market St. and Schley St.	20
Over road crossings 8th to 18th Sts., National City	20
Over road crossing at 28th St., San Diego	20

PASSENGER TRAINS DESCENDING between following points:

Redondo and Kilometer 54—Tecate and M. P. 83	35
Hipass and Jacumba—Culvert 106-B and Coyote Wells	35

FREIGHT AND MIXED TRAINS DESCENDING between following points:

Hipass and Jacumba—Culvert 106-B and Coyote Wells	20
Redondo and Kilometer 54—Tecate and M. P. 83	25

ALL TRAINS:

LA MESA SUBDIVISION

Crossing 30th St. on Commercial St.	5
Across 13th St. and National Ave.	10
Over Electric Ry. crossing at 16th St. on Commercial St.	10
Between 8th St. and 32nd St.	15
Between 32nd St. and Francis St.	20
Between Francis St., San Diego and El Cajon	25
Except on curves between east switch Lemon Grove and La Mesa and first curve east of La Mesa	20

CORONADO SUBDIVISION

On F St. and 3rd Ave., Chula Vista	10
Between 12th St., National City and Bridge 6.02	10
Between Bridge 6.02 and Hotel Oil Spur, Coronado	20
Between Hotel Oil Spur, Coronado and North Island	15

INTERNATIONAL BOUNDARY

Trains approaching gate at International Boundary, San Ysidro, will sound one long blast of whistle to inform Government Officials of their presence. If prompt response is not gained after whistle blast, an employee will go at once to Government Headquarters and request service.

Trains will stop before crossing the International Boundary Line at San Ysidro. Trains in both directions when not accompanied by Customs Immigration Rider will stop at Campo. Trains in both directions will stop at Tecate. Trains must not cross International Boundary Line without first notifying Customs and Immigration Officers and obtaining necessary permission from them.

Westward trains coming into Tijuana, when not accompanied by rider, will proceed without stopping to Boundary line for inspection by Officers of the Mexican Government, after which cars for Tijuana may be set out and necessary switching performed. Mixed trains will also stop passenger equipment at depot when passengers are handled.

Trains carrying passengers will not stop between Lindero and Campo Stations except in cases of emergency.

STRUCTURES LESS THAN STANDARD CLEARANCE

Carriso Gorge Subdivision

Ice dock at Boal.

Ice dock Boal is equipped with aprons which must be raised and secured before moving cars on adjoining track.

Rock bins, sand chute and braces for overhead conveyor Otay Gravel Pit spur.

Pipe and counter-weights on Malt Plant, Tecate.

Coronado Subdivision

W. J. Bush Citrus Co., National City, curb and unloading chute. Trains will not pass platform.

La Mesa Subdivision

Overhead highway bridge main line between Grossmont and El Cajon.

San Diego Yards

Trolley wires and pole on Fifth Avenue spur between J and L Streets.

Freight house tracks.

Union Oil Company spur tracks.

Sperry Flour Company Spur.

ADDITIONAL STATIONS

Carriso Gorge Subdivision

Spurs

Name	Mile Post	Capacity
Linen	9.5	16 Cars
Standard	19.2	4 Cars
Barrett	67.1	16 Cars
Clover Flat Pit	74.4	17 Cars
Aspara	142.1	6 Cars

Stations

West Park Ave.	14.2	
Mills Crossing	83.5	

INSTRUCTIONS IN CASE OF FIRE

1. FIRE FIGHTING EQUIPMENT:

(a) FIVE GALLON FIRE EXTINGUISHERS ARE LOCATED AT FOLLOWING POINTS:

Between Tunnels 1 and 2	West end Tunnel 14
Between Tunnels 3 and 4	West end Tunnel 15
West end Tunnel 5	West end Tunnel 16
West end Bridge 97-C	East end Tunnel 17
East end Tunnel 6	West end Tunnel 18
Both ends Tunnel 8	West end Bridge 104-A
West end Tunnel 10	West end Bridge 104-B
West end Tunnel 11	West end Tunnel 19
West end Tunnel 12	West end Tunnel 20
East end Tunnel 13	West end Tunnel 21

Note:—Fire extinguishers at Tunnels are located just inside tunnel portals.

(b) CONNECTIONS FOR PORTABLE PHONES IN CARRISO GORGE ARE LOCATED AT FOLLOWING POINTS:

Near West end Tunnel 5	Near both ends Tunnel 14
East end Tunnel 6	West end Tunnel 15
West end abandoned Tunnel 7	East end Tunnel 16
Both ends Tunnel 8	West end Tunnel 17
West end Tunnel 9	West end Tunnel 18
West end Tunnel 10	West end Tunnel 19
East end Tunnel 12	West end Tunnel 20
East end Tunnel 13	West end Tunnel 21

There are telephones at the east end of Tunnel 11 and at the east end of Bridge 102-A.

These connections are provided for emergency service only and anyone using them in an attempt to get help must, after his call has been placed, DISCONNECT HIS PORTABLE PHONE so that Operator can call camps. Failure to disconnect phone will interfere with calling circuit.

(c) FIRE HOSE AND CONNECTIONS ON LOCOMOTIVES: Engines No. 27, 101, 102, 103, 104, 105, 106, 2383, and 2384, are equipped with fire hose connections on feed water line between the injector and the check valve. On the deck of the tender of these engines there is a hose reel holding 100 feet of fire hose with nozzle attached. When using hose, be sure to close valve ahead of the check valve before opening valve on the fire hose connection. This will prevent hot water backing up into hose line in case check valve fails to seat.

Other engines not equipped with hose connections, if location of fire permits, will get Tank Car at Tunnel 15 Spur and move it to fire, using equipment mounted on tank.

(d) TANK CAR MW 1001:

Tank Car MW 1001 with 10,000 gallons of water is kept first out at Tunnel 15 Spur. On deck over top of tank is mounted a steam pump, 300 feet of fire hose on a reel, and a tool box containing fire-fighting tools and fittings. Car is equipped with headlights on each end, and extension cord to be plugged into socket in cab of engine is kept in tool box. Steam line to pump is fitted with steam hose connection at each end of car, so that pump may be operated from either end of engine or train, and by either steam or air. A length of steam hose and fittings are kept in tool box of tank car to make connections. When pump is run by air, automatic brake valve on engine should be held in Full Release position to increase volume of air.

2. INSTRUCTIONS:

(a) Rear brakeman and fireman on eastward trains will keep a sharp lookout after passing Tunnel 15 Spur and be prepared to accept stop signal from Tunnel Guard.

(b) Steam hose must be coupled and steam cut through to rear of passenger trains at all times regardless of weather conditions. This in order to handle fire-fighting car at Tunnel 15 Spur at rear of train.

(c) Trains discovering a fire should immediately call operator so other equipment can be dispatched to the fire. Every effort should be made to extinguish the fire with the equipment on the engine and tender. If it is evident that fire cannot be put out with equipment at hand, or if engine is not equipped with fire hose, and it is possible to reach Tank Car at Tunnel 15 Spur, get that car and return it to the fire while there is sufficient water left in the tender to make the round trip. Tank Car should be picked up so that it will be headed into the fire ahead of engine or train. Stake and pinch bar are included with tools on deck of tank car.

Tunnels and bridges in some places are located so close together that a fire may spread to another structure. While it might not be possible to extinguish the fire in one structure, equipment should stand by to prevent fire from spreading.

Employes will use their best judgment in meeting an emergency and act in the safest and quickest way to meet the conditions.

(d) Tank Car MW 1001 must always be left, filled and first out at Tunnel 15 Spur.

SPEED TABLE

Speed per Hour	1 Mile in Min. Sec.	1 Kilometer in Min. Sec.	Speed per Hour	1 Mile in Min. Sec.	1 Kilometer in Min. Sec.	Speed per Hour	1 Mile in Min. Sec.	1 Kilometer in Min. Sec.	Speed per Hour	1 Mile in Min. Sec.	1 Kilometer in Min. Sec.
6	10.00	6.13	21	2.51	1.46	31	1.56	1.12	41	1.27	0.54
8	7.30	4.40	22	2.43	1.41	32	1.52	1.10	42	1.25	0.53
10	6.00	3.44	23	2.36	1.37	33	1.49	1.08	43	1.23	0.52
12	5.00	3.06	24	2.30	1.33	34	1.45	1.05	44	1.21	0.51
15	4.00	2.29	25	2.24	1.29	35	1.42	1.03	45	1.20	0.50
16	3.45	2.20	26	2.18	1.26	36	1.40	1.02	46	1.18	0.48
17	3.31	2.11	27	2.13	1.23	37	1.37	1.00	47	1.16	0.47
18	3.20	2.04	28	2.08	1.20	38	1.34	0.58	48	1.15	0.46
19	3.09	1.57	29	2.04	1.17	39	1.33	0.57	49	1.13	0.45
20	3.00	1.52	30	2.00	1.15	40	1.30	0.56	50	1.12	0.44

RATINGS OF ENGINES

In M's of 1000 pounds back of Tender

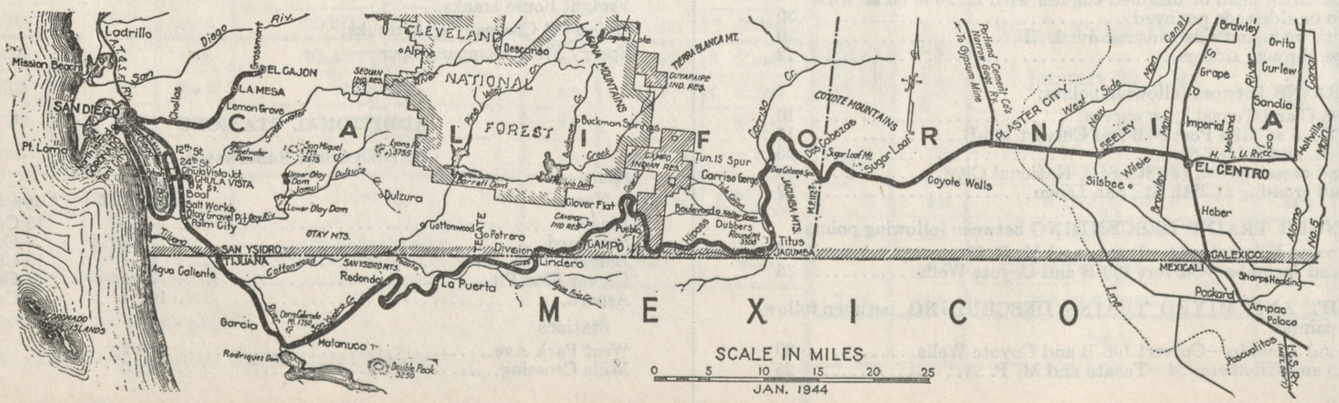
Eng. No.	Nominal Class	Official Class	Garcia to Redondo .9% Grade	Redondo to Hipass 1.4% Grade	Marea to Coyote Wells .9% Grade	Coyote Wells to Hipass 2.2% Grade	.4% Grade	Level Track
12	T-56	T-57 18/24 95	1400	810	1400	490	2650	7450
27	T-58	T-63 21/26 141-S	2300	1350	2300	830	4350	12200
50	C-30	C-50 20/24 122	2050	1200	2050	760	3800	10600
101, 102	C-31	C-57 22/30 198-S	3250	1900	3250	1200	6050	16800
105	C-10	C-57 22/30 194-S						
2383	T-31	T-63 22/28 162-S	2900	1700	2900	1050	5450	15250
2384	T-32	T-69 23/28 174-S	2900	1700	2900	1050	5450	15250

SURGEONS

LOCATION	NAME	TITLE
San Francisco....	Dr. C. A. Walker.....	Chief Surgeon and Mgr.
San Diego.....	Dr. F. C. Russell.....	District Surgeon
San Diego.....	Dr. H. G. Holder.....	District Surgeon
San Diego.....	Dr. T. F. O'Connell.....	District Surgeon
La Mesa.....	Dr. T. M. Cunningham..	District Physician
Tijuana B C Mex.	Dr. Molina Reyes.....	District Surgeon
El Centro.....	Dr. F. W. Peterson.....	District Surgeon
El Centro.....	Dr. W. W. Apple.....	District Surgeon
Calexico.....	Dr. T. E. Bartholomew.	District Surgeon
Calexico.....	Dr. Harold J. Gregg....	Assistant District Surgeon

HOSPITALS

General Hospital, San Francisco, California.
Division Hospital, Mercy Hospital, Hillcrest Drive, San Diego, Calif.



S. A. LAMEY,
Trainmaster and Chief Train Dispatcher.

DONALD LITTLE,
Assistant Trainmaster.